mentation are similar to those of ammoniacal fermentation. These ferments also act on starch and cane sugar. 10. One can always, with the aid of carbolic acid or creasote, stop the evolution of microzymes in normal urine and its ammoniacal fermentation.—*Bull. de l'Acad. de Méd.*, 2me série, t. x.

Hemorrhage by Vaso-motor Irritation.

M. **Brown-Séquard** has observed hemorrhages under the occipito-atloid membrane and in the cavity of the fourth ventricle in birds whose neck had been cut off at the level of the fifth or sixth cervical vertebra. These hemorrhages did not result from the effusion of blood from the section and reascending toward the cervical region, for the intermediate space contained no effusion. He thinks that these hemorrhages are similar to those seen in different organs following lesion of the upper part of the cord, and refers them to a vaso-motor irritation produced by lesion of the central nervous system, and is inclined to explain them by this mechanism; the vaso-motor irritation producing at once energetic constriction of the arteries and veins, determines also a forcible projection of blood into the capillaries, the walls of which yield to the excess of internal pressure.—*Gazette Hebdom.*, April 20, 1883.

MATERIA MEDICA AND THERAPEUTICS.

Physiological Effects of Cinchonidine.

MM. G. **Sée** and **Bochefontaine** have made a series of physiological experiments with a sample of cinchonidine, the purity of which was proved by Oeschner and Coninck.

Toxic Properties.—Frogs succumbed to gr. ¼ of sulphate of cinchonidine introduced subcutaneously; dogs to ℈ij given in the same manner. Pigeons and rabbits were not so much affected.

Physiological Effects.—These were in accordance with those noted by Raffestie (1876), Weddell (1877), and Cerna (1879). They were similar to the effects of quinine and cinchonine, the convulsions and salivation of the last being more pronounced in the dog, just as the vomiting from cinchonidine is more noticeable in that animal. None of these agents produced convulsions in the frog, and they are frequently absent in rabbits and dogs, and are only produced by toxic doses; consequently none of them can be classed without restriction as convulsive agents, such as strychnia; their place is rather among the substances which depress the central nervous system after momentarily exciting the circulation. It may be remarked that on man; in the normal state (the experiments being made on one of the authors of the memoir), sulphate of cinchonidine produces acceleration of pulse, increased surface heat, etc.; that is to say, a collection of symptoms which is ordinarily combated therapeutically by sulphate of quinine.—*Gazette Hebdom.*, April 20, 1883.

Physiological Action of Veratrine.

MM. **Pecholier** and **Redier**, after a series of experiments on frogs, rabbits, and dogs, draw the following conclusions as to the action of veratrine:—

1. *Local action.*—It has a topical irritating effect on the skin and mucous membranes, which is augmented when the derma is removed. 2. *Digestive*

tract.—Veratrine is a powerful emeto-cathartic, producing abundant vomiting and copious stools. 3. *Secretions.*—Hypersecretion of nasal mucus, sialorrhœa, moderate diuresis, diaphoresis rarely. 4. *Circulation.*—(1) Primitive acceleration due in great part to the vomiting. (2) Secondary slowing of the heart's action, which may terminate in collapse. Heart stops in diastole. Alteration of the blood. In the frog, arrest of the lymphatic hearts before the blood-heart. 5 *Action on respiration.*—(1) Primitive acceleration. (2) Secondary slowing: painful and difficult respiration. 6. *Temperature.*—Lowering clearly determined by the thermometer. 7. *Muscular system.*—(1) Primitive excitation more or less short, according to the intensity of the dose, with apparent contractions. (2) Subsequent weakening and paralysis. Clear antagonism by strychnine, in spite of the opposite opinions of many authors. (3) Complete paresis and collapse. 8. *Nervous system.*—(1) Nervous motility not affected; the primitive excitability of the muscular tissue is determined by the contact of the veratrinized blood on the muscular fibre and not by the action of the motor nerve affected by the veratrine. This substance, Kölliker to the contrary notwithstanding, has no direct action on the cord. (2) *Sensibility;* to the irritating topical action, already mentioned, succeeds anæsthesia and analgesia. The intellectual functions are not impaired.—*Gaz. Hebdom.*, April 27, 1883.

Eucalyptus Steam in Infectious Diseases

MR. J. MURRAY GIBBES, of New Plymouth, N. Z., has presented an interesting note of his experience with this treatment, which consists in keeping the patient in an atmosphere of blue-gum (*Eucalyptus globulus*) steam. It is an acknowledged fact that in blue-gum we have a most perfect disinfectant; not an artificial one, but one of nature's own; one always at hand, for it will grow in temperate climates. The green leaves hung in a bedroom keep it sweet; leaves placed on a wound, steam inhaled from it, or its infusion drank, or injected into wounds, all answer equally well. Professor Lister speaks highly of the eucalyptus oil for wounds, and it is also spoken highly of in rheumatism. It has not an unpleasant smell, and is tolerated by nearly all. By infectious diseases, he means those which are caused by micro-organisms.

His experience with this disinfected steam was in an epidemic of diphtheria near New Plymouth in October, 1882. Thirty-seven cases in which the treatment was carried out recovered without a bad symptom, such as paralysis, without any medicine except castor-oil, and without stimulants, which disproves the statement that diphtheria requires a large quantity of alcohol. The disinfectant he used was made by pouring boiling water on blue-gum leaves. The patients were kept in the moist atmosphere for some days. He mopped the throat with dilute solution of perchloride of iron and glycerine every eight hours, and then covered the pharynx with powdered sulphur. This was done in most cases, but the others recovered equally well. Two young ladies, aged seventeen and nineteen, coughed up complete casts of the large bronchi. An old lady, after he had mopped her throat once, refused to have it done; she had a very dense patch behind and on the right tonsil, the glands of her neck were very swollen and tender, the neck enlarged, and the breath was most offensive. On the third day half of the membrane had come away in small pieces, like grains of rice, the breath was sweet, and the swelling of the neck had nearly disappeared, and she made a perfect recovery. The epidemic was an unusually severe one, judged by the number of deaths of those who were treated by other means. The last cases which occurred took place in two families closely allied, five children and their nurse being attacked. He attended two of the children (the first and last attacked)